

IN THE CLAIMS:

The following listing of claims will replace all prior listings of claims in the application:

1. (Previously Presented): A system for uploading frame data to system memory, the system comprising:

a CPU coupled to the system memory and configured to execute an application program,

the CPU executing a Transmission Control Protocol (TCP) stack which includes code to complete at least some TCP processing;

a hardware subsystem preconfigured to process all frames related to one or more connections delegated by the TCP stack to produce frame data and to upload the frame data to a user buffer in the system memory allocated to the application program, if the user buffer is available, and to a legacy buffer in a portion of the system memory that is not allocated to the application program, if the user buffer is not available, wherein frame data uploaded to the legacy buffer is copied from the portion of the system memory that is not allocated to the application program to the system memory that is allocated to the application program; and

the system memory including a connection table (CT) storing data for all active connections with system including delegated connections, reads and writes to the CT being made directly through the hardware,

the hardware subsystem being further preconfigured to request legacy processing by the TCP stack of the frames of the delegated connections.

2. (Original): The system of claim 1, wherein the frame data is payload data.

3. (Previously Presented): The system of claim 1, wherein the TCP Stack provides the hardware with a physical address corresponding to a user buffer.

4. (Previously Presented): The system of claim 1, wherein the hardware is configured to process frames to produce partially processed frame data and upload at least a

portion of the partially processed frame data to a legacy buffer, the hardware maintaining the CT entry point for each received packet.

5. (Previously Presented): The system of claim 4, wherein the legacy buffer storing the portion of the partially processed frame data is stored in the portion of system memory that is not allocated to the application program.

6. (Previously Presented): The system of claim 2, wherein the hardware is configured to upload at least a portion of the payload data to the legacy buffer.

7. (Cancelled)

8. (Original): The system of claim 6, wherein a software driver provides the hardware with a tag corresponding to a location of the legacy buffer.

9. (Previously Presented): The system of claim 8, wherein the hardware is configured to transmit the tag to the software driver.

10. (Previously Presented): A method of uploading frame data including Transmission Control Protocol (TCP) payload data to system memory, the method comprising:

processing a frame to produce frame data;

uploading the frame data to either a portion of system memory comprising a user buffer allocated to an application program, if the user buffer is available, and to a legacy buffer in a portion of the system memory that is not allocated to the application program for separate TCP processing by a TCP stack executing on a CPU, if the user buffer is not available;

copying frame data uploaded to the legacy buffer from the portion of the system memory that is not allocated to the application program to the system memory that is allocated to the application program; and

utilizing hardware separate from the CPU which does the TCP processing to partially process the frame and determine whether the frame was delegated by the separate TCP processing.

11 – 20. (Cancelled)

21. (Previously Presented): The system of claim 1 wherein the hardware is configured to pause incoming frame data to determine whether a frame is invalid, the invalid frame being stored in the legacy buffer for legacy processing.
22. (Previously Presented): The system of claim 4, wherein the TCP stack is configured to process the frame data uploaded to the legacy buffer by the hardware.
23. (Cancelled)
24. (Previously Presented): A method as claimed in claim 10 wherein the TCP stack completes processing of the partially processed frame stored in the legacy buffer.
25. (Previously Presented): A method as claimed in claim 24 wherein the partial processing of the frame produces partially processed frame and header data.
26. (Previously Presented): A method as in claim 10 wherein the user buffer is defined as not available when the processed frame portion exceeds a start up limit value associated with the delegated connection carrying the frame being processed.
27. (Previously Presented): A method as in claim 10 wherein the uploaded frame data includes TCP payload data.
28. (Previously Presented): A system as in claim 1 wherein the hardware accesses the CT using the distribution port field of a frame as a direct index into the CT.
29. (Previously Presented): The system of claim 1, wherein the portion of system memory that stores the legacy buffer is allocated to a software driver.
30. (Previously Presented): The method of claim 10, wherein the portion of system memory that stores the legacy buffer is allocated to a software driver.